

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>633</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/DK 03/00718</b>	International filing date (day/month/year) <b>23/10/2003</b>	(Earliest) Priority Date (day/month/year) <b>23/10/2002</b>
Applicant  <b>LEO PHARMA A/S</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished:

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/DK 03/00718

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 18-21  
because they relate to subject matter not required to be searched by this Authority, namely:  
Claims 18-21 relate to methods of treatment of the human or animal body by therapy (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds or compositions.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/00718

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C401/00 A61K31/59 A61P5/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 95 02577 A (LEO PHARM PROD LTD ;GRUE SOERENSEN GUNNAR (DK)) 26 January 1995 (1995-01-26) the whole document	1-23
X	WO 91 00855 A (LEO PHARM PROD LTD) 24 January 1991 (1991-01-24) the whole document	1-23
X	B. L. ONISKO ET AL : "Synthesis of potential vitamin D antagonists" TETRAHEDRON LETTERS, vol. 18, no. 13, 1977, pages 1107-1108, XP002271061 the whole document	1-23
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

20 February 2004

Date of mailing of the international search report

25. 03. 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

PER RENSTRÖM/ EÖ

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/03/00718

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MALUCHE HH ET AL: "Update on vitamin D and its newer analogues: actions and rationale for treatment in chronic renal failure" KIDNEY INT., vol. 62, no. 2, August 2002 (2002-08), pages 367-374, XP002271062 the whole document -----</p>	1-23

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/93/00718

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9502577	A	26-01-1995	AT 165346 T	15-05-1998
			AU 690564 B2	30-04-1998
			AU 7182994 A	13-02-1995
			CA 2162040 A1	26-01-1995
			CN 1125941 A ,B	03-07-1996
			DE 69409811 D1	28-05-1998
			DE 69409811 T2	07-01-1999
			WO 9502577 A1	26-01-1995
			EP 0708755 A1	01-05-1996
			ES 2117281 T3	01-08-1998
			FI 956108 A	19-12-1995
			JP 8512327 T	24-12-1996
			NZ 268567 A	24-11-1997
			RU 2130926 C1	27-05-1999
			US 5716945 A	10-02-1998
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WO 9100855	A	24-01-1991	AT 112556 T	15-10-1994
			AU 630227 B2	22-10-1992
			AU 6156390 A	06-02-1991
			CA 2057048 A1	11-01-1991
			DE 69013155 D1	10-11-1994
			DE 69013155 T2	09-03-1995
			WO 9100855 A1	24-01-1991
			DK 482100 T3	07-11-1994
			EP 0482100 A1	29-04-1992
			ES 2064749 T3	01-02-1995
			FI 93724 B	15-02-1995
			IE 902317 A1	16-01-1991
			JP 2807087 B2	30-09-1998
			JP 4506965 T	03-12-1992
			KR 195547 B1	15-06-1999
			NZ 234326 A	26-03-1993
			PH 27301 A	04-05-1993
			US 5190935 A	02-03-1993
			ZA 9005094 A	24-04-1991
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